

Two lines are parallel if and only if they are in the same plane and do not intersect.

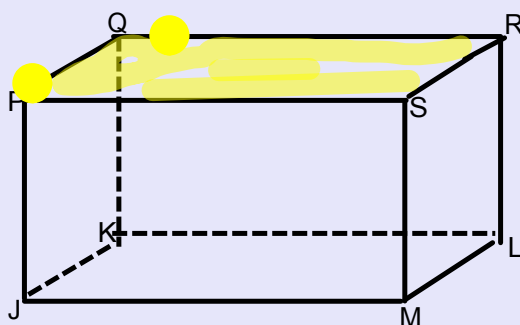
$$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$$

$$\overline{AB} \parallel \overline{CD}$$

$$\overrightarrow{AB} \parallel \overrightarrow{CD}$$

$$\overrightarrow{BA} \parallel \overrightarrow{DC}$$

Planes can also be //



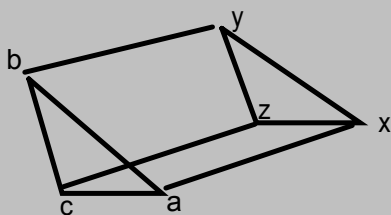
Plane PSR // Plane JML

Plane JMS // Plane _____

Plane PJK // plane _____

Definition: Skew Lines

Two lines that are not in the same plane are skew if and only if they do not intersect.



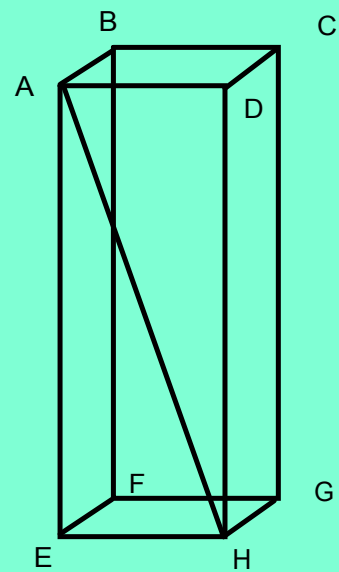
Joe, Chris, AJ, Mark, Christine and Clarissa: look at line segment ax. it will never intersect with line segment bc. they are skew segments.

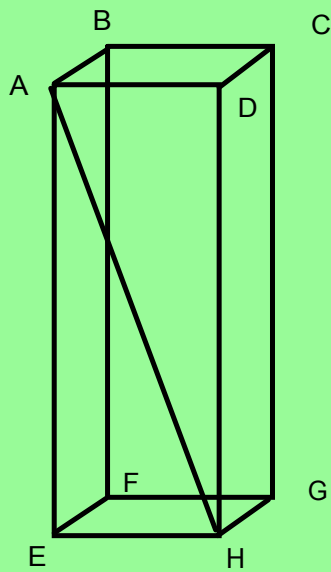
Name all the planes \parallel to plane ABC

all segments that intersect with
segment \overline{AB}

all segments \parallel to \overline{FG}

all segments skew to \overline{EF}



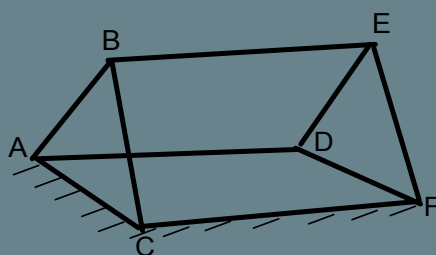


all planes parallel to plane ABF

all segments that intersect \overline{DH}

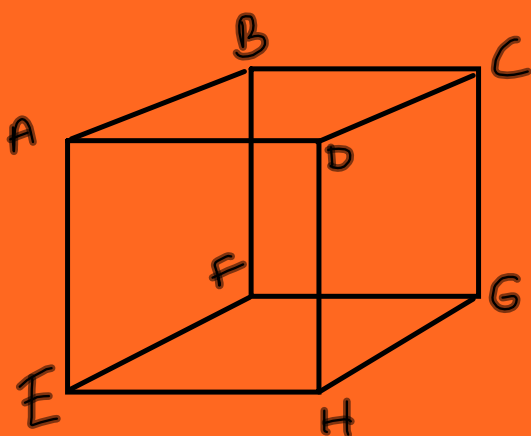
all segments parallel to \overline{CD}

all segments skew to \overline{AB}



Describe Each pair of segments in the prism as parallel, skew or intersecting.

- | | |
|-----------|------------|
| 1. BE, CF | 6. AD, BE |
| 2. AD, EF | 7. BC, EF |
| 3. AB, DE | 8. AB, CF |
| 4. AB, BC | 9. AD, BC |
| 5. BE, BC | 10. BC, DE |



Name the parts of the cube shown at the right.

1. six planes
2. all pairs of parallel angles
3. all segments parallel to EH
4. all segments skew to GH
5. all segments parallel to AE
6. all segments skew to BF

Homework:

copy the sketch below

list the parallel line segments

list the intersecting line segments

list the skew lines segments

